SOME NOTES ON THE SPECIES OF ERIOSPERMUM WHICH OCCUR IN THE CAPE PENINSULA.

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A recent examination of the species of Eriospermum occurring in the Cape Peninsula brings to light the fact that there have hitherto been several misconceptions as regards their identity. Since the publication of the Flora Capensis, Vol. VI (1897) in which the late J. G. Baker made an attempt to collect together the scanty information on the subject then available in Europe, two papers have appeared which relate in part to our local species. These are (i) " The Eriospermums of the Stellenbosch Flats " by Dr. A. V. Duthie in Ann. of the Stellenbosch University, Vol. II, Sec. A, No. 3 (1924), a valuable field study of which the only criticism is the incorrect *identification* of two of the species, and (ii) " Eriospermums " by Dr. R. Marloth in South African Gardening and Country Life XIX (1929), pp. 249, 325—7, about which, as far as the local species are concerned, there is little to be said in praise These two papers are hereinafter referred to as (*Duthie*) and (*Marloth*).

Owing to the fact that all the local species are hysteranthous, i.e., the flowers and leaves appear at different seasons, the determination of specimens in this genus is not easy. They require careful and systematic collecting and it is perhaps safest to obtain the tuber, which in itself has important characters, and grow it in cultivation to ensure correlation of the leaves and flowers. The system of marking plants in the field generally proves unsatisfactory, for the marks are often removed or lost and only a small proportion of the plants produce flowers.

Two Peninsula species which have hitherto been misidentified are here described as new (*E. pumilum* and *E. cordiforme*), and a full amended description of *E. cernuum* Sond. is also given. *E. Duthieae* sp. nov., which is described here, does not occur in the Cape Peninsula, but it is included owing to its having been mistaken for *E. cernuum* (*Duthie*, p. 8). Since the species *E. latifolium* Jacq. is identical with the *Ornithogalum capense* of Linnaeus (an older name), it will be referred to under the new combination *E. capense* (p. 109).

It is not always possible to distinguish the species of Eriospermum either by the flowers or the leaves *alone*. In the key to the species which follows, an attempt has been made to combine the floral and leaf characters in such a way that the observer may arrive at a determination, and it is worth noting that the dead shrivelled leaves, particularly in the most difficult species, often persist during the flowering season and if these are carefully collected with the flower and are soaked and flattened, they will provide the necessary clue to the species. It cannot be too strongly stressed that casually collected separate leaves and flowers such as now clutter up herbaria cannot be determined and are therefore useless. As will be seen from the key, the tuber is sometimes an important factor in the determination and if possible it should be photographed or sketched.

In the early literature the term petiole is mistakenly used for the petiole-like attachment of the lamina to the tuber apex. Recent investigation by Dr. A. V. Duthie and Mr. S. Garside on seed germination and leaf morphology in this genus have shown conclusively that the so-called petiole is an extremely elongated leaf-sheath, corresponding to that in Convallaria (Lily of the Valley). It is referred to in this paper as the petiolar leaf-base.*

KEY TO THE SPECIES.

- Peduncle spirally twisted : leaf-blade slender, terete : tuber globose *spirule.*
- Peduncle not spirally twisted : leaf blade flat.
  - Scape 4—10 cm. high : leaf oblong-lanceolate, less than 1 cm. broad : tuber globose .. .. *pumilum.*
  - Scape 15—60 cm. high : leaf more than 1 cm. broad : tuber not globose.
    - Pedicels more than 1 cm. long, curving upwards, the lower much longer than the upper : inflorescence lax.
      - Leaf lanceolate, more or less erect : filaments ovate *lanceaefolium*
      - Leaf cordate, usually prostrate.
        - Leaf up to 4 cm. broad with a narrow red edge, not undulate at the margin : filaments linear .. .. *nanum.*
        - Leaf 4—12 cm. broad, not red-edged, but usually undulate at the margin : filaments ovate.
          - Leaf ciliate : tuber usually with fleshy underground runners .. .. .. *stoloniferum.*
          - Leaf not ciliate : tuber without runners .. *capense.*
    - Pedicels less than 1 cm. long, all more or less equal, the flowers in a close spike.
      - Leaf cordate : filaments ovate .. .. .. *cordiforme.*
      - Leaf oblong, lanceolate or ovate.
        - Leaf blade lanceolate, 10—20 cm. long, fleshy, often undulate at the margin : petiolar leaf-base fleshy : filaments ovate. .. *lanceaefolium.*
        - Leaf blade oblong or ovate, 4—10 cm. long : petiolar leaf-base wiry : filaments linear *cernuum.*

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*A. V. Duthie: Contribution to our Knowledge of the Genus Eriospermum Ann. Univ. Stellenbosch, 18. A2. 1940. 8.

Eriospermum pumilum Salter, sp. nov. *Planta* hysterantha nana, 4—10 cm. alta. *Tuber* depresso-globosum, 0·8—2·5 cm. latum. *Folia* apicalia, erecta, plerumque solitaria, rarius 2 vel 3 : lamina glabra, oblongo-lanceolata, 2—3 cm. longa, 5—7 mm. lata, parte petiolacea exserta superne plerumque pubescente. *Pedunculus* gracilis, rigidus, (parte subterranea inclusa) 7—15 cm. longa. *Racemus* anguste conicus, 2—4 cm. longus, 6—20-florus : pedicelli inferiores 4—15 mm. longi, superiores gradatim breviores. *Perianthium* campanulatum, 4—5 mm. longum, segmentis omnibus subpatentibus. *Filamenta* linearia.

Hab. Cape Peninsula ; Kenilworth Racecourse, on a granite outcrop, *Salter* 8838 (*type* in Bolus Herbarium), *Schlechter* 456, *Bolus* 7123 ; De Klip, in a similar situation, *Salter* 8364 ; near Wynberg, *Schlechter* 1387 ; Claremont Flats, *Guthrie* 787 ; Stellenbosch Div., on flats near Stellenbosch, *Duthie* 546, Herb. Univ. Stell. 1360, 1370, *Salter* 8373.

Hysteranthous, dwarf, 4—10 cm. high. *Tuber* often 3—5 cm. deep, depressed globose, 0·8—2·5 cm. in diam., with white flesh, the roots emerging on the upper half : growing point solitary or rarely 2—3, apical. *Leaves* erect, appearing in May : lamina oblong-lanceolate, glabrous, usually 2—3 cm. long, 5—7 mm. broad, the exserted part of the petiolar leaf-base as long as or shorter than the lamina, usually pubescent. *Peduncle* slender, rather wiry, glabrous, including the subterranean part 7—15 cm. long, with one short sheathing bract. *Raceme* glabrous, appearing Mch.—Apl., 2—4 cm. long, narrowly conical, usually 6—20-flowered : pedicels erecto-patent, the lowest 4—15 mm. long, the upper gradually shorter : bracts basal, broadly ovate, acute, semiamplexicaul, about 1 mm. long. *Perianth* campanulate, the segments almost free, 4—5 mm. long, with a greenish-brown keel, the margins submembranous, the outer oblong, subobtuse, the inner narrow-obovate, acute, spreading. *Filaments* linear, 2·2 mm. long : anthers ovoid, about 1 mm. long. *Ovary* ovoid, smooth, 1·3 mm. long : style slender, as long as the ovary. *Capsule* turbinate, 3—4 mm. long : seeds coated with white wool.

This small species was first cited by Baker (*Schlechter* 456) under *E. cernuum* the plant referred to being from the same locality as *Salter* 8838. This specimen was either overlooked or accepted as *E. cernuum* by Dr. Marloth. Dr. A. V. Duthie identified plants of this species as *E. parvifolium* Jacq., describing them under that name (*Duthie*, p. 9 and Pl. 4), but later, on the discovery of the true *E. parvifolium* in Namaqualand by the late Dr. Marloth, acknowledged that they had been wrongly identified. *E. pumilum* is evidently a close affinity of that species, but differs in the very much smaller size of all its parts, narrower

leaves, the compact and shorter inflorescence and in the smooth unridged broader ovary.*

In the Cape Peninsula it occurs in crevices or shallow soil overlying granite outcrops on the Flats and though confined to small areas, it is abundant and gregarious in habit. It is also very common on the Stellenbosch Flats.

Eriospermum cordiforme Salter, sp. nov. *Planta* hysterantha, 15—50 cm. alta. *Tuber* informe, 3—8 cm. in diam., tuberculata, vetusta majora, ramosa. *Folia* plerumque basalia vel lateralia : lamina prostrata, cordata, in umbrosis protracta, 5—16 cm. longa, 4—13 cm. lata, inferius parte petiolacea vix exserta, saepe hirsuta. *Pedunculus* erectus (parte subterranea inclusa) 20—55 cm. longus. *Racemus* densus, spiciformis, saepe secundus, 3—12 cm. longus, 10—28-florus, pedicellis subaequalibus, brevibus. *Perianthium* urceolato-campanulatum, fere 5.5 mm. longum : segmenta basi breve connata, exteriora subpatentia, interiora erecta, apice coarctata. *Filamenta* basi connata, parte libera ovato-deltoidea, fere 2 mm. longa.

Hab. Cape Province : Cape Peninsula, near Milnerton, *Salter* 8351 (*type* in Bolus Herbarium) ; Devil's Peak, *Salter* 8315, *Marloth* 8490 ; Camps Bay, *Marloth* 4367, 7573, 8330. Caledon Div., Kleinmond, *Marloth* 13608 ; Swellendam, *Marloth* 12947 ; Riversdale, *Andreae* 1139.

Hysteranthous 15—50 cm. high. *Tuber* usually 5—12 cm. deep, irregular in shape, the older with reddish flesh, commonly 3—8 cm. in diam. or larger, branching and compound in old plants, the old growth hardish, brown, the new pale, the numerous root-bases tuberculate. Growing point solitary or several in old plants, the new growth usually ascending in a distinct groove on the lateral or basal surface of the tuber. *Leaves* solitary or produced on each lobe, appearing in June, more or less prostrate, broadly cordate, but lengthening in shade, 5—16 cm. long, 4—13 cm. broad, slightly transversely wrinkled, undulate at the margin on the lower half, the petiolar leaf-base sometimes hirsute, scarcely exserted above ground except when the leaf is drawn up by surrounding vegetation. *Peduncle* erect, 20—55 cm. long, appearing Feb.—Mch. *Raceme* dense, spicate, secund, 3—12 cm. long, 10—28-flowered, the pedicels subequal, 2—7 mm. long : bracts small, semi-amplexicaul, broadly ovate, acute or attenuate. *Perianth* about 5·5 mm.

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* The following specimens in Dr. Marloth's herbarium, named *E. apicale* Marloth (unpublished), have been identified by Dr. Duthie and Mr. Garside as the true *E. parvifolium* Jacq. Namaqualand : Steinkopf District, mountains near Klipfontein Station, *Marloth* 12477, *G. Meyer* (Marloth 12943 b), 23 miles S.W. of Steinkopf, among shrubs, *Marloth* 13250 ; O'Okiep, *Marloth* 12493 ; Kamieskroon, *Peers* (Marloth 13694).

long, urceolate-campanulate, the segments connate at the base for about ¼ of their length, dull white, brown-keeled and suffused with minute red streaks below, the outer elliptic, acute, somewhat spreading, the inner erect, obovate, slightly pinched in at the apex. *Stamens* about half as long as the perianth, connate at the base, the free part ovate-deltoid. *Ovary* broadly ovoid, as long as the style. *Capsule* turbinate or pyriform, about 6 mm. long. *Seeds* ovoid, 2 mm. long, coated with white hairs.

The leaves of the type specimens from Milnerton are entirely glabrous, but those from Table Mt. and Devil's Peak are more or less hirsute on the petiolar leaf-base.

This is the species which the late Dr. Marloth unaccountably mistook for *E. Bellendenii* Sweet, which was described from a plant "from South Africa" grown in England and figured in Bot. Mag. tab. 1382, but it scarcely corresponds with the description of that plant in any particular except the shape of the leaf and the spicate arrangement of the flowers. Its thinner leaf, smaller and slightly gamopetalous perianth segments and differently shaped filaments (ovate-deltoid, connate at the base and not lanceolate, almost free), separate it from such plants as *Zeyher* 739, Uitenhage and *MacOwan*, Somerset East, cited by Baker as *E. Bellendenii*, whether or not he was correct in associating these specimens with the illustration referred to above.

Eriospermum Duthieae Salter, sp. nov. *Planta* hysterantha gracilis, omnino glabra, 5—30 cm. alta. *Tuber* cylindricum vel pyriforme, 1—4 cm. longum, rarius lobatum. *Folia* lateralia vel basalia, erecta, plerumque solitaria: lamina oblonga vel elliptica vel anguste ovata vel lanceolata, 2—4 cm. longa, 0·6—1·6 cm. lata, parte petiolacea exserta. *Pedunculus* gracilis (parte subterranea inclusa) 8—35 cm. longus, basin versus leviter flexuosus. *Racemus* 2—5·5 cm. longus, 2—18-florus, subcernuus, saepe secundus: pedicelli inferiores ad 1·4 cm. longi, superiores gradatim breviores. *Perianthii* segmenta patentissima, 5—5·5 mm. longa. *Filamenta* lineari-lanceolata, attenuata.

Hab. Cape Province: on flats near Stellenbosch, *Duthie* (Herb. Univ. Stell. 1362, *type* in Bolus Herbarium), 1083, 1373, 1361, *Salter* 8375; near Mulders Vley, *Salter* 8387: Somerset West, on flats, *Garside* 4985.

Hysteranthous, entirely glabrous, 5—30 cm. high. *Tuber* cylindrical or pyriform with white flesh, 1—4 cm. long, simple or more rarely lobed, the longer axis horizontal, inclined or vertical, 3—5 cm. deep in the soil, the growing point at the broader end. *Leaves* erect, usually solitary, or produced on each lobe; appearing July: blade oblong, elliptical, narrow-ovate or lanceolate, acute or subobtuse, 2—4 cm. long, 0·6—1·6 cm. broad, slightly involute at the base, the petiolar leaf-base 6—10 cm. long, the exserted part as long as or longer than the blade. *Peduncle* very slender, wiry, including the subterranean part usually 8—35 cm. long, often slightly flexuous towards the base, with one small sheathing bract. *Inflorescence* appearing Mch.—May: raceme 2—5·5 cm. long, 2—18-flowered, often secund and subcernuous: lower pedicels up to 1·4 cm. long, the upper gradually shorter: bracts basal, minute. *Perianth* open and wide-spread, the segments 5—5·5 mm. long, white, minutely red-streaked towards the greenish keel: the outer oval, the inner broadly cuneate-obovate, subacute, very minutely toothed on the upper margins. *Stamens* about half as long as the perianth segments: filaments linear-lanceolate, attenuate. *Ovary* subglobose, as long as the style. *Capsule* about 4 mm. long: seeds small, 1·5—2 mm. long, coated with white hairs.

This plant was first identified as the ill-described *E. cernuum* Baker and described as such by Dr. Duthie (*Duthie*, p. 8 and Plates 2 and 3). As will be seen from the amended description of *E. cernuum* which follows, it differs in many important characters. Furthermore, unlike *E. cernuum*, it is gregarious in habit. It does not, as far as is known, occur in the Cape Peninsula.

For further particulars of this species see *Duthie*, p. 9, pars. 1—4.

ERIOSPERMUM CERNUUM Baker. This species was first named by Baker in Flora Capensis, VI., 370, where he gives a short and entirely inadequate composite description of two different species (here a character from one and there a character from the other). In neither species are the fresh flowers cernuous as described.

Three collectings are cited. *Bolus* 7238 (Hout Bay) and *Schlechter* 427, flowers only (near Retreat Station) are one species and *Schlechter* 456 (Kenilworth Racecourse) is another. The latter species which has also been found at Stellenbosch, is here given the name *E. pumilum* sp. nov.

It is proposed to choose the first-cited specimen, *Bolus* 7238, as the *lectotype* of *E. cernuum* Baker and the following is a new and amended description of this species.

Eriospermum cernuum Baker, emend. Salter. Hysteranthous, entirely glabrous, 20—40 cm. high. *Tuber* more or less oval or pyriform, smooth, often 15 cm. deep, up to 4 cm. long, with pale flesh, the growing point at the broader end. *Leaf* usually solitary, erect, dark green, appearing in June, the exserted part of the petiolar leaf-base rigid about as long or longer than the lamina: lamina oblong or ovate, acute or subobtuse, usually 4—10 cm. long, 1—2 cm. broad. *Peduncle* slender, erect, including the subterranean part 30—60 cm. long. *Raceme*, appearing Feb.—Mch., erect closely spicate, 8—18-flowered: pedicels subequal, the lowest up to 2·5 mm. long. *Perianth* urceolate-campanulate, the segments entire with whitish margins, minutely red-streaked towards the rather narrow greenish keel, the outer somewhat spreading, narrow-obovate, subacute, about 5 mm. long, the inner cuneate, acute, slightly pinched in and white-winged at the apex, about 6 mm. long, rather wider than the outer. *Filaments* linear, tapering slightly towards the apex, more than half as long as the perianth segments. *Ovary* broadly ovoid, smooth, about as long as the style. *Capsule* slightly longer than the perianth. Seeds coated with white wool.

Hab. Cape Peninsula; hill sides and sand dunes neat Hout Bay, *Bolus* 7238 (*lectotype* in Bolus Herbarium); near Retreat, *Schlechter* 427 (without leaves); Kenilworth Racecourse, *Bolus* 7937; Cape Flats, *Zey.* 4278; Claremont Flats, *W.-Dod* 926, *L. Bolus*; Young's Field, *Salter* 8366; Steenberg Plateau, *Salter* 8348; near Smitswinkel, *Levyns* 6548, *Salter* 8318, 8370; Red Hill, 8362; Klaver Valley 370/3; Sirkels Vley, 3044b: Somerset West, on flats, *Garside* 5006.

This species occurs on heathy flats and hill plateaus, growing up through low vegetation, often among Restionaceae, but it is not very common, the plants usually being isolated and widely separated. It has unfortunately been confused with yet a third and very different smaller and highly gregarious species (*E. Duthieae* Salter) which has a lax and somewhat cernuous inflorescence, occurring on the Stellenbosch Flats, and it is to this plant that Dr. Duthie's description of *E. cernuum* Baker (*Duthie*, p. 8) refers.

Eriospermum capense (L.) Salter, comb. nov. (*Ornithogalum capense* L.—*E. latifolium* Jacq.). *Ornithogalum capense* was founded by Linnaeus (Sp. Plant. I, 1753) on two old pre-Linnaean drawings:—

Breyn, Centuria prima t. 41.
Commelin, Hort. Amstel. ii, t. 88.

but there is no specimen authenticated by Linnaeus in his herbarium.

Breyn's figure is not well drawn, but there is little doubt that that of Commelin represents the species later so excellently figured by Jacquin as *E. latifolium* (Icones ii, 18, t. 420), the name by which it is known in the Flora Capensis. The leaves in Commelin's figure appear to be slightly etiolated, as might be expected in a plant cultivated in Europe, and they resemble those of wild specimens which grow in partial shade.

E. capense grows abundantly on the western slopes of Lion's Head above Fresnaye and it is also recorded from Orange Kloof. It has large cordate glabrous leaves and a lax inflorescence with upcurving pedicels up to 4·5 cm. long. The late Dr. Marloth makes a categorical statement that *E. capense* (*E. latifolium* Jacq.) does not occur in the Cape Peninsula (*Marloth,* p. 249). Even granted that he himself was not fortunate enough to observe it, he seems to have overlooked several unmistakeable specimens in the Bolus Herbarium. If, as seems probable, he saw *only the leaves* of this species, he apparently concluded that apart from the species which he named *E. stoloniferum* Marloth, there was only one other with large cordate leaves, i.e. the species which he erroneously attributed to *E. Bellendenii* Sweet and which is here described as *E. cordiforme* sp. nov.

The leaves of both species are similar in shape, but those of *E. capense* are not always longitudinally plicate as shown in his photograph (*Marloth,* Fig. 1). It is doubtful whether the leaves alone are distinctive, particularly when dried, and the leaves collected by Thunberg, to which Dr. Marloth refers, do not seem to be of any importance, for they may have belonged to either species.

Above Fresnaye *O. capense* usually grows in the open, but also, less abundantly, in partial shade and it appears to hybridise* with *E. lanceaefolium* Jacq., which in that locality occurs mostly in shady situations, even in the dense shade of pine woods. In shade, as is the case with all species with cordate leaves, the lamina in *E. capense* tends to lengthen and the petiole to become exserted, and such leaves resemble those of some of the suspected hybrids. Further in *E. lanceaefolium,* even in apparently pure colonies as judged from the leaves, two distinct kinds of inflorescence occur, one a close spike with subsessile flowers and the other a lax raceme with longer upcurving pedicels, very similar to that of *E. capense* : intermediate states are also not uncommon. Inflorescences which appear to be intermediate between the two species, must therefore be treated with suspicion. In the dense shade of a pine wood near Fresnaye *E. lanceaefolium* was plentiful and although only the spicate form of inflorescence was found, many of the leaves collected later were abnormally broad for *E. lanceaefolium,* suggesting that such plants were the result of past hybridisation and that only hybrids near to *E. lanceaefolium* had been able to survive in such dense shade. (Fig. 1.)

A series of leaves all collected in an area about 6 ft. square in partial shade, just below the wood, show a complete range between the two species, and the one dead inflorescence found, that belonging to the leaf A, was intermediate. (Fig 2.)

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* My suspicions of hybridisation between these two species were originally aroused by Mr. S. Garside, who discovered a colony showing a high degree of polymorphism, almost certainly due to hybridisation, when we were collecting near Wemmershoek in 1934. Specimens from this colony have been cultivated over a period of years by Dr. A. V. Duthie, and it is hoped that a detailed description of these will be published at an early date.

Among bushes below the wood, where typical plants of both species occur, there were intermediate leaves, many of which were too narrow to suggest etiolated forms of *E. capense.* (Fig. 3.)

On the open slopes which had been burnt off two years ago, *E. capense* was growing in the greatest abundance. Here only one plant of *E. lanceaefolium* was observed and a few intermediate leaves were found which suggested hybrid origin. (Fig. 4.) The tuber of a plant with an intermediate inflorescence, collected in this area, produced in cultivation a leaf proportionately wider than that of *E. lanceaefolium.*

E. LANCEAEFOLIUM Jacq. (Icones ii, t. 421). This species is fairly common and seems to flourish equally well both in open places and in shade, being one of the few plants that has been able to survive in the pine woods which have ousted so much of the indigenous vegetation.

The two kinds of inflorescence have already been mentioned. The short-pedicelled form is by far the commoner in the Cape Peninsula and this form alone seems to occur in shady situations. In colonies which occur on open ground a few plants with the lax inflorescence and long pedicels, together with intermediates, will generally be found. Such colonies occur in the shallow soil overlying the granite outcrops at De Klip and on Kenilworth Racecourse where, since *E. capense* has never been observed, there is no suspicion of hybridisation to account for the two types of inflorescence.

It is remarkable that no specimens of this species should have been seen by Baker. *Bolus* 6610 from Little Namaqualand, the only specimen which he cites, seems to be closely akin to *E. parvifolium* Jacq. and is certainly not *E. lanceaefolium.* On the other hand probably none of the plants which he cites as *E. parvifolium* actually belong to that species. Judging from a tracing in the Bolus Herbarium, *Burchell* 8343, from between Stellenbosch and Bottelary Hill, appears to be *E. graminifolium* Duthie. (*Duthie*, p. 10.)

E. STOLONIFERUM Marloth. (*Marloth*, p. 249.) This species is very local and is only known to occur on damp ledges within the cloud area on the north-east face of Lion's Head, just above the pine woods. The production of fleshy underground runners is not peculiar to this species, but this character, together with the constantly ciliate leaves, does distinguish it from *E. capense.* The inflorescences are identical and it is perhaps little more than a local variety.

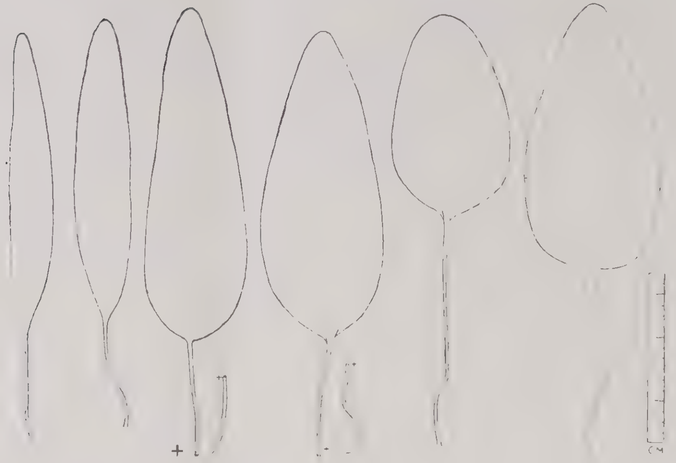

FIG. 1. Leaves of Eriospermum from dense shade in a pine wood. The two narrow leaves are typical of *E. lanceaefolium*, the remainder suggest hybridisation with *E. capense*. All × ⅓.

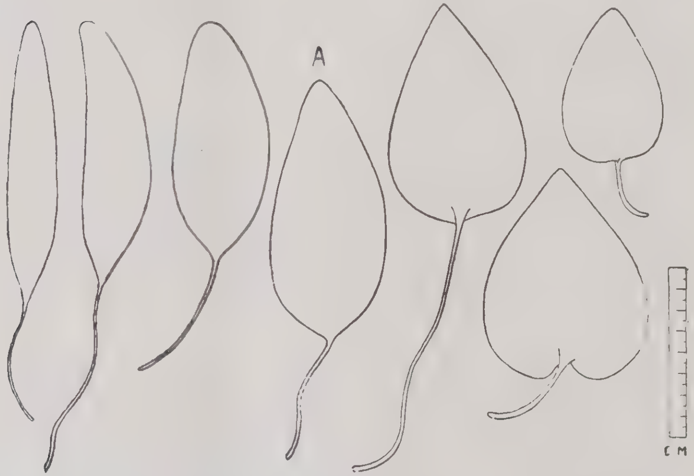

FIG. 2. Leaves of *Eriospermum lanceaefolium*, *E. capense* and supposed hybrids from a colony in partial shade. The plant with the leaf "A" had a withered inflorescence which was intermediate between the two species. All × ⅓.

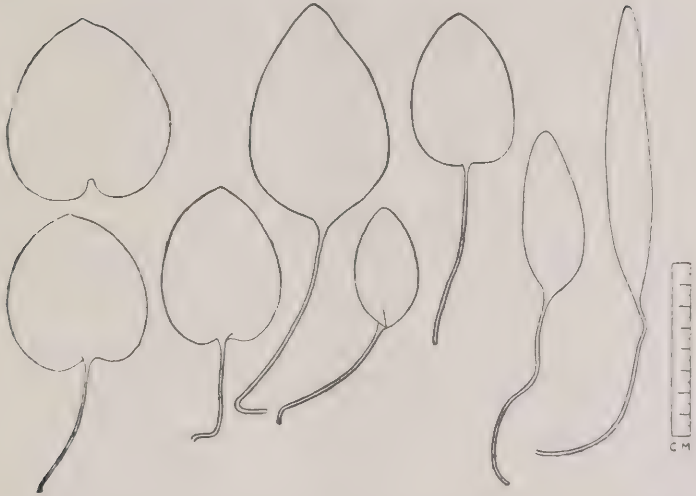

Fig. 3. Leaves of *Eriospermum capense* and *E. lanceaefolium* from bushy ground, together with intermediates suggesting hybridisation. All × ⅓.

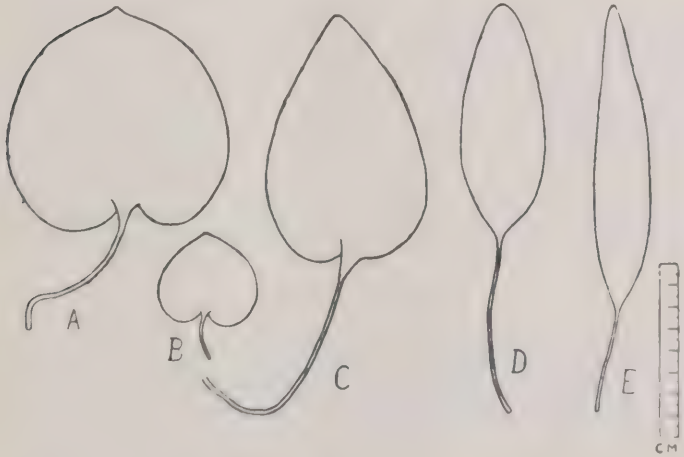

Fig. 4. Leaves of Eriospermum from open hills slopes. A and B. Typical *E. capense.* C. A shade form of the same. D. A supposed hybrid. E. Typical *E. lanceaefolium.* All × ⅓.

E. NANUM Marloth. (*Marloth*, p. 325.) is perhaps the commonest and most widely distributed of the local species and also the most variable in size. The small hill-side form only seems to have been known to Dr. Marloth, but his description of the species is inaccurate and does not even agree with the specimens in his own herbarium. In many of these the scape is longer than 4—6 inches, the pedicels are often 1 inch (not 3—6 lines) long and the perianth constantly 2½—3 lines (not 4 lines) long.

Plants which undoubtedly belong to the same species occur in semi-open places in pine woods at Bergvliet and Tokai in which the scapes are up to nearly 2 ft. high, up to 29-flowered and with pedicels over 1½ inches long. The name *nanum* (dwarf) is therefore hardly appropriate.

E. SPIRALE (L.) Berg. has not been observed locally for some years· One former habitat, an outcrop of granite on Kenilworth Racecourse has been almost entirely demolished through quarrying and it can no longer be found there. The only other recorded locality, given vaguely as Claremont Flats (1892) may now have been built over, but the plant is very small and inconspicuous and it may possibly still occur. It flowers in April and May and has very small white flowers, but the leaf, which appears in July, is minute and very difficult to find. It is locally common on the Stellenbosch Flats (*Duthie*, p. 11).

E. PUBESCENS Jacq. has been listed as a Peninsula species and though it becomes common in the Malmesbury and Stellenbosch Divisions, there appears to be no authentic record of its occurrence nearer than the flats east of Blaauwberg, about 16 miles away. Baker in Flor. Cap., cites *Bolus* 3916 from the "Cape Flats." but the specimens are without leaves and therefore impossible to identify. The locality "near summit of Lion's Head" given for this species in the "List of Flowering Plants in the Cape Peninsula" by Dr. H. Bolus and Major Wolley-Dod in Transactions of S.A. Phil. Soc. Vol. XIV. p. 340, suggests that the plant from this locality was the one later described as *E. stoloniferum* Marloth.

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